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EXAMINER	
MOORE, IAN N	

ART UNIT	PAPER NUMBER
2661	17

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/619,361	Applicant(s) USUDA ET AL.	
	Examiner Ian N Moore	Art Unit 2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-22 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-10 and 12-21 is/are rejected.

7)☒ Claim(s) 11 and 22 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the **new** ground(s) of rejection.

Regarding claims 1 and 12, the applicant argued that, "...Amezawa does not disclose the **calculation of differences** of propagation estimation values between **different times** in the past and the **certain time (i.e. changing amount during the time periods)...**" in page 13, last paragraph.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., **calculation of differences, different times, and certain time**) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Regarding claims 2 and 13, the applicant argued that, "...averaging of Vasic is carried out in a time period of 1 pilot signal, and it is different from that of the invention of claims 2 and 13..." in page 14, 2nd paragraph.

In response to applicant's argument, the examiner respectfully disagrees that the Vasic does not disclose the claimed invention averaging/estimation means. Claim limitation discloses "estimation means" which is disclosed by Vasic in FIG. 2, Channel Estimator 40. Also, note that Sawahashi also discloses invention of averaging means in col. 6, line 17-25.

Regarding claims 2 and 13, the applicant argued that, "...Shiraki ...does not estimate a variation from different transmit power control section in the past to a certain present..." in page 14, 4th paragraph.

In response to applicant's argument, the examiner respectfully disagrees that the combined system of Vasic and Shiraki does not estimate a variation from different transmit power control section in the past to a certain present. Vasic estimates a variation, see Vasic's FIG. 2, Channel Estimator 40. Shiraki discloses **different** transmit power control section in the past to a certain present and calculate the variation/differences. In particular, Shiraki's receiver unit determines the changes in the transmit power received between **different** transmit power control sections: n^{th} period (i.e. present section) and $n-1^{th}$ period (i.e. the past section). Note that present period and past period are different power control sections. Then after, the step size (i.e. the changing power amount) is determined whether to increase or decrease the transmit power received in **col. 3, line 60 to col. 4, line 45; and col. 14, line 1-67**.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Regarding claims 1, 2, 12 and 13, the applicant argued that, "...and multiplying the changing amounts...none of the Sawahashi, Ling, Kitade, Kubo, and the alleged well known arts discloses this feature " in page 13 last paragraph and page 14, first paragraph.

In response to applicant's argument, the examiner respectfully disagrees that the "multiplying the changing amounts" features of applicant's invention is not shown by well-known art. Note that regarding claim 1 and 12, Amezawa discloses the **subtraction** the changing amounts/values. Rereading claim 2 and 13, Vasic discloses the combining/adding the changing amounts/values. In particular for claims 1 and 12, Amezawa'362 performs the correction by subtraction in order to obtain a result, which is used for averaging. Thus, it is clear that one skill in the art can also performs correction by **multiplying** in order obtain the same result as subtraction, which is used for averaging. Regardless of the type of method (i.e. subtraction or multiplying) being used, the end result, a corrected data in order to perform averaging, is the same. In particular for claims 2 and 13, Vasic'194 performs the correction by combing/adding in order to obtain a result of corrected data/value. Thus, it is clear that one skill in the art can also performs correction by **multiplying** in order obtain the same result as combing/adding. Regardless of the type of method (i.e. combing or multiplying) being used, the end result, a corrected data/value, is the same.

Moreover, it is noted that test for combining reference is what the combination of discloses taken as a whole would suggest to one ordinary skill in the art, thus, one cannot show non-obvious by arguing reference individually where, as here, the rejections are based on combination of references. In view of the above, the examiner believes that the combination of references as set forth in the 103 rejections is proper, thus, Claims 2 and 13 are obvious over Vasic, Shiraki, Sawahashi, in view of well established teaching in art for at least the reasons discussed above. Similarly, claims 1 and 12 are obvious over Amezawa, Sato, in view of well-established teaching in art for at least the reasons discussed above.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 7,9,10, 18,20 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites the limitation "...using a power control indicator **from own station**" in page 4, line 12. It is unclear what "from own station" whether is it is a base station, mobile unit, or both.

Claim 18, please see claim 7 above.

Claim 9, recites "...**channel of which a in each**..." (in line 2, page 5 and line7), "...**high is higher** ..." (in line 4), and "...small is smaller..." (in line 4). It is unclear what above limitation exactly means or referring to.

Claim 20, please see claim 9 above.

Claim 10 recites "...there is **not a channel other than channel**..." in page 5, line 21, "...**or even when transmitting but not performing**..." in page 6, line 4. It is unclear what above limitation exactly means or referring to. It is unclear what above limitation exactly means or referring to.

Claim 21, please see claim 10 above.

Claim 10 recite the limitation "**possible**" in line 18 and "**not possible**" page 6 line 4. It is unclear what these relate terms means, and how possible and not possible should that be with regards to the invention.

Claim 21, please see claim 10 above.

Claim Objections

3. Claim 10, 11, 20, 21 and 22 are objected to because of the following informalities. Appropriate correction is required.

Claim 10 recites, "...**a small section smaller than**..." in line 19. For clarity, it is suggested to include a comma between "section" and "smaller" as in "**a small section, smaller than**...".

Claim **11, 21, and 22** please see claim 10 above.

Claim 11 recites, "...**a large section larger than**..." in line 12. For clarity, it is suggested to include a comma between "section" and "larger" as in "a large section, larger than...".

Claim **22**, please see claim 11 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amezawa (U.S. Patent 6,438,362) and Sato (U.S. 6,088,324), in view of well established teaching in art.

Regarding Claims 1 and 12, Amezawa '362 discloses a CDMA reception apparatus comprising (see FIG. 1, a CDMA portable-telephone device; see col. 3, line 7-10):

propagation path variation estimation means (**see FIG. 1, Propagation path estimator 14 and 21**) for estimating a propagation path variation from transmit power control sections in the past to a certain present transmit power control section to obtain a propagation path variation estimation values (**see col. 3, line 24-26;** the estimator 14 and 21 estimate propagation-path characteristics and supply the estimated values of the propagation-paths. The estimator obtains the estimated value using a moving-averages method, wherein an averaging is executed over a predetermined number of the latest data in the signal input thereto one after another; note that the averaging is performed on the predetermined number of latest data (i.e. the latest input data compares to the previous numbers of data). The purpose of averaging is to obtain estimated path variation value among previous numbers of data and current number of data; **see col. 3, line 33-35**.)

propagation path variation correction means (**see FIG. 1, Subtracter 15**) means for correcting at least one of vector, amplitude and/or power of a received signal of said plurality of transmit power control sections by said propagation path variation estimation value obtained by said propagation path variation estimation means (**see col. 3, line 57-61;** the subtracter 15, provided with the estimated value, obtains a corrected value by subtracting the

estimated value from the received demodulated pilot signal PD1. Then, the subtracter 15 supplies the corrected value to the interference-signal power calculator 17);

and averaging means **(see FIG. 1, Interference signal power calculator 24)** for averaging at least one of vector, amplitude and/or power of received signal of said plurality of transmit power control sections corrected by said propagation path variation correction means **(see col. 3, line 61-65;** the interference-signal power calculator 17 averages the corrected value by using a weighted averaging technique with a forgetting factor so as to improve the accuracy of the interference-signal power).

Amezawa'362 does not explicitly discloses different transmit power control sections.

However, the above-mentioned claimed limitations are taught by Sato'324. In particular, Sato'324 teaches collecting **(see FIG. 1, memory)**, correcting/adjusting **(see FIG. 1, Amplitude correction circuit 114)**, comparing **(see FIG. 1, comparing circuit 118)** and controlling **(see FIG. 1, control circuit 121; see col. 8, lines 25-51)** variation of different transmit power control sections in the past **(see FIG. 3, first/second slot)** to a certain present transmit power control section **(see FIG. 3, third/fourth slot; note that variation of <u>different</u> Transmit power control sections from past to a certain present/current slot; see col. 10, lines 9 to col. 11, lines 33).**

In view of this, having the system of Amezawa'362 and then given the teaching of Sato'324, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Amezawa'362, for the purpose of providing different transmit power control sections, as taught by Sato'324, since Sato'324 states the advantages/benefits at col. 3, lines 50-65 that it would correct an amplitude of the carrier

signal point detected by detection means according to previous transmission power control values and predict a carrier signal point when next control for transmission power is executed. The motivation being that by collecting and comparing different transport power values from past which is stored in the memory to current, it can correct the amplitude of carrier signal point, thereby reducing the interference to other mobile and base stations since the signal amplitude is corrected/adjusted.

Neither Amezawa'362 nor Sato'324 explicitly discloses correction means for multiplying.

However, the above-mentioned claimed limitations are taught by well-established teaching in art. In particular, well-established teaching in art teaches correction means for multiplying. Note that Amezawa'362 performs the correction by subtraction in order to obtain a result, which is used for averaging. Thus, it is clear that one skill in the art can also performs correction by **multiplying** in order obtain the same result as subtraction, which is used for averaging. Regardless of the type of method (i.e. subtraction or multiplying) being used, the end result, a corrected data in order to perform averaging, is the same.

In view of this, having the combined system of Amezawa'362 and Sato'324, then given the teaching of well established teaching in art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Amezawa'362 and Sato'324, for the purpose of correcting by multiplying, as taught by well established teaching in art The motivation being that by performing the multiplication to correct data/value, it can create an alternative and easier way to build the efficient algorithm for correcting data/value.

2. Claims 2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vasic (U.S. Patent 6,178,194), Shiraki (U.S. 6,389,296), Sawahashi (U.S. Patent 5,590,409), and further in view of well established teaching in art.

Regarding amended Claims 2 and 13, Vasic '194 discloses a CDMA reception apparatus and method comprising:

transmit power changing amount estimation means (**see FIG. 2, Channel Estimator 40**; note that a channel estimation unit 40 estimates the transmits power changing amount by extracting, measuring, interpolating, and generating; **see col. 6, line 31-53**);

transmit power changing amount correction means (**see FIG. 2, Diversity Combiner 30 corrects the transmit power amount**) for correcting at least one of vector, amplitude and/or power of a received signal of said plurality of transmit power control sections by said transmit power changing amount estimation value obtained by said transmit power changing amount estimation means (**see FIG. 3, Diversity combiner receives and combines received signal power r1 and carrier estimated value p1 obtained by carrier estimator order to perform correcting; col. 6, line 41-44, see col. 10, lines 22-65**);

Vasic '194 does not explicitly disclose changing amount of transmit power of a communication partner station varied by transmit power control from different transmit power control sections in the present transmit power control section from respective transmit power control sections in the past (**see Shiraki'296 col. 3, line 60 to col. 4, line 45; and col. 14, line 1-67**; note that the receiver unit determines the changes in the transmit power received between different transmit power control sections: n^{th} period (i.e. present section)

and n-1th period (i.e. the past section). Then after, the step size (i.e. the changing power amount) is determined whether to increase or decrease the transmit power received.)

However, this limitation is taught by Shiraki'296. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Vasic '194, as taught by Shiraki'296 for the purpose of determining the changes/deviation in the transmit power control sections between current session and past session since Shiraki'296 states in col. 15, line 15-35 that such modification would reduce the deviation of the transmission power control form a desired power in response to the travel speed of the mobile station. The motivation being that by determining the changes transmission power control in the receiver, it can reduce the interference among mobile units since the transmit power is adjusted beforehand.

Neither Vasic '194 nor Shiraki'296 explicitly discloses averaging means for averaging at least one of vector, amplitude and/or power of received signal of said plurality of transmit power control sections corrected by said transmit power changing amount correction means (**see Sawahashi '409 col. 6, line 17-25**, the mobile station 100 sequentially measures average received power per transmission power control period, of the desired signal transmitted from the base station 200. Thus, the mobile station 100 calculates the average received power of the desired signal in the present transmission power control period and that in one or more previous transmission power control period, and then calculates the difference of the two).

This limitation is taught by Sawahashi '409. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined

system of Vasic '194 and Shiraki'296, as taught by Sawahashi '409 for the purpose of preventing the interference to other mobile stations by achieving, by using open loop control, a quick reduction in the transmission power of the mobile station in accordance with the state of neighboring buildings in the reverse transmission power control, see Sawahashi '409 col. 4, line 4-9. The motivation being that by averaging, it can reduce extreme power variations.

Neither Vasic '194, Shiraki'296, nor Sawahashi '409 explicitly discloses correction means for multiplying.

However, the above-mentioned claimed limitations are taught by well-established teaching in art. In particular, well-established teaching in art teaches correction means for multiplying. Note that Vasic'194 performs the correction by combing/adding in order to obtain a result of corrected data/value. Thus, it is clear that one skill in the art can also performs correction by **multiplying** in order obtain the same result as combing/adding. Regardless of the type of method (i.e. combing or multiplying) being used, the end result, a corrected data/value, is the same.

In view of this, having the combined system of Vasic'194, Shiraki'296, nor Sawahashi '409, then given the teaching of well established teaching in art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Vasic'194, Shiraki'296, and Sawahashi '409, for the purpose of correcting by multiplying, as taught by well established teaching in art The motivation being that by performing the multiplication to correct data/value, it can create an alternative and easier way to build the efficient algorithm for correcting data/value.

3. Claims 3 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amezawa'362 and Sato'324, as described above in claims 1 and 12 above, and further in view of Ling (U.S. Patent 5,297,161) and well established teaching in art.

Regarding Claims 3 and 14, the combined system of Amezawa '362 and Sato'324 discloses the averaging means as described in claims 1 and 12 above. Amezawa'362 further discloses wherein said averaging means and converting into a power (**see col. 3, line 18-26**; power calculator calculates/converts the desire signal and interference power from estimation values. Then, the power values are averaged; **see col. 4, line 52-57**).

Amezawa '362 does not explicitly disclose vector and converting vector divided by said division means into a power (**see Ling '161 Abstract**, a method and apparatus is provided for estimating signal power. The estimating is accomplished by correlating (206) an input data vector (204) with a set of mutually orthogonal codes to generate a set of output values. The input data vector (204) consists of data samples of a received orthogonal coded signal (202)).

However, this limitation is taught by Ling '161. **Moreover, well-established teaching in art discloses the "addition means", "division means", and "averaging means".** In particular, it is well known in the art that in order to perform "averaging" over plurality of elements the following steps must be done utilizing well known mathematical technique: "addition means for performing vector addition" (i.e. First, add vector value of each element), "division means for dividing a vector added by said vector addition means with a number of vectors added" (Second, divide the sum of vectors by the total number of vectors).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Amezawa '362 and Sato'324, as taught by Ling '161 and utilizing well known mathematical technique for the purpose of averaging power which is accomplished by correlating an input data vector with a set of mutually orthogonal codes to generate a set of output values, see Ling '161 col. 4, line 65-68. The motivation being that vectors cannot be averaged without converting into power in order to estimates the power control, which reduces the interfaces among mobile stations.

4. Claims 4, 5, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amezawa '362 and Sato'324, as described above in claims 1 and 12, and further in view of well established teaching in art.

Regarding Claims 4 and 15, the combined system of Amezawa '362 and Sato'324 discloses said averaging means as described in Claims 1 and 12 above. Amezawa'362 further discloses wherein said averaging means is provided with amplitude addition and means for converting amplitude into a power (**see col. 1, line 42-46;** note that s1, s2 and i1, i2 respectively represent the values of the desired-signal amplitude and the interference-signal amplitude contained in the received signals r1 and r2. The amplitudes are added in Eqs. (1)-(6). **Also, see col. 4, line 52-57**; similarly, the interference-signal power I1 corresponds to the power of the signal i1 in Eqs. (1)-(6); **see col. 3, line 18-36**. The SIR processor 18 also converts amplitudes into a power).

Amezawa '362 does not explicitly disclose addition means for performing amplitude addition; division means for dividing amplitude added by said amplitude addition means with a number of amplitudes added; and means for converting amplitude divided.

However, this limitation is taught by well-established teaching in art. In particular, **well-established teaching in art discloses the "addition means", "division means", and "averaging means".** In order to perform "averaging" over plurality of elements the following steps must be done utilizing well known mathematical technique: "addition means for performing amplitude addition" (i.e. First, add amplitude of each element), "division means for dividing added by said amplitude addition means with a number of amplitudes added" (Second, divide the sum of amplitude by the total number of amplitudes).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Amezawa '362 and Sato'324 as taught by established teaching of well known mathematical techniques of estimating for the purpose of estimating power utilizing amplitudes. The motivation being that amplitudes cannot be averaged without converting into power in order to estimates the power control, which reduces the interfaces among mobile stations.

Regarding Claims 5 and 16, the combined system of Amezawa '362 and Sato'324 discloses averaging means as described in claims 1 and 12 above. Amezawa'362 further discloses the averaging means is provided with the power calculation (**see col. 3, line 18-26**; note that the SIR processor 18 are supplied from the desired-signal power calculator 16 and

the interference-signal power calculator 17 the desired-signal power S1 and the interference-signal power I1; **see col. 4, line 52-57**).

Amezawa '362 does not explicitly disclose addition means for performing power addition; division means for dividing a power added by said power addition means with a number of powers added.

However, this limitation is taught by well-established teaching in art. In particular, **well-established teaching in art discloses the "addition means", "division means", and "averaging means".** In order to perform averaging over plurality of elements the following steps must be done utilizing well known mathematical technique: "addition means for performing power addition" (i.e. First, add power of each element), "division means for dividing added by said power addition means with a number of powers added" (Second, divide the sum of power by the total number of powers).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Amezawa '362 and Sato'324, as taught by established teaching of well known inherent mathematical techniques for the same reasons as discussed above in Claims 4 and 15.

5. Claims 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amezawa '362 (U.S. Patent 6,178,194) and Sato'324, as applied to claims 1 and 12 above, and further in view of Rezaiifar (U.S. 6,377,809).

Regarding Claims 6 and 17, the combined system of Amezawa '362 and Sato'324 discloses propagation path variation estimation means for estimation propagation path various from transmit power control sections as described in claims 1 and 12 above.

Neither Amezawa '362 nor Sato'324 explicitly discloses wherein using a channel (**see Rezaiifar'809 FIG. 2 and 3**; control channel) not performing transmit power control whose transmit power is not controlled (**see Rezaiifar'809 col. 8, lines 20-34, 20-34; see col. 9, lines 1-32**; note that the control channel is used to transmit control frames when there is scheduling or control information (i.e. estimation means), when transmit power control is not performing since power control bits are not transmitting. Since power control bits are not transmitting on the control channel, transmit power not controlled).

However, this limitation is taught by Rezaiifar'809. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Amezawa '362 and Sato'324, as taught by Rezaiifar'809 for the purpose of providing a control channel to send control information while transmit power control not performing nor transmit power is controlled, since Rezaiifar'809 states in col. 9, line 15-24 that it will increase capacity and minimize interference. The motivations being that by utilizing the control channel to send control information while not performing transmit power control, it will increase radio bandwidth capacity and decrease the interference.

6. Claims 7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vasic'194, Shiraki'296 and Sawahashi '409, as applied to claims 2 and 13 above, and further in view of Dohi (U.S. Paten 5,604,766).

Regarding claims 7 and 18, the combined system of Vasic'194, Shiraki'296, and Sawahashi '409 discloses the CDMA reception apparatus, wherein said transmit power changing amount estimation as described in Claims 2 and 13 above.

Neither Vasic'194, Shiraki'296, nor Sawahashi '409 disclose a transmit power changing amount using a transmit power control indicator transmitted from said CDMA reception station (**see Dohi '766 col. 5, line 49-55**; note that if the measured result is greater than the reference SIR, the mobile station transmits a transmission power control bit which commands the base station to reduce its transmission power. On the contrary, if the measured result is less than the reference SIR, the mobile station transmits a transmission power control bit, which commands the base station to increase its transmission power (step S24). The transmission power control bit is inserted into an information signal in a reverse frame, and is transmitted to the base station).

This limitation is taught by Dohi '766. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Vasic '194, Shiraki'296S, and Sawahashi '409, as taught by Dohi '766 for the purpose of determining a transmission power control bit for controlling the transmission power of the base station on the basis of the measured result, see Dohi '766 col. 2, line 25-28. The motivation being that by sending power control indicator, it can alert the remote station to adjust the power accordingly.

7. Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amezawa '362 (U.S. Patent 6,178,194) and Sato'324, as applied to claims 1 and 12 above, and further in view of Sawahashi '409 (U.S. Patent 5,590,409).

Regarding Claims 8 and 19, the combined system of Amezawa '362 and Sato'324 disclose averaging means as described above in claims 1 and 12 above.

Neither Amezawa '362 nor Sato'324 explicitly discloses setting an averaging section setting means for setting an averaging section (**see Sawahashi '409 col. 6, line 17-24**, note that mobile station constantly measures the average received power per transmission power control period/section, set the averaging section for the power calculation in accordance with the transmission power control but; see Sawahashi '409 col. 4, line 24-29).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Amezawa '362 and Sato'324 as taught by Sawahashi '409 for the purpose of preventing the interference to other mobile stations by achieving, by using open loop control, a quick reduction in the transmission power of the mobile station in accordance with the state of neighboring buildings in the reverse transmission power control, see Sawahashi '409 col. 4, line 5-9. The motivation being that by averaging, it can reduce extreme power variations.

Allowable Subject Matter

8. Claims 11 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N Moore whose telephone number is 703-605-1531. The examiner can normally be reached on M-F: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Vanderpuye can be reached on 703-308-7828. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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6/24/2004

KENNETH VANDERPUYE
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